
U.S. Department of the Interior • U.S. Geological Survey

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BISMUTH IN THE FIRST QUARTER 1997

Domestic consumption of bismuth in the first quarter of 1997 was the same, in total, as in the fourth quarter of 1996, and nearly the same in the principal market sectors. As compared with the first quarter of 1996, the total was 9% lower; nearly all of the decrease was attributable to lower consumption in the chemicals sector.

The New York dealer price, as published by Platt's Metals Week, drifted down from \$3.30 per pound at the beginning of the year to \$3.20 per pound at the end of the first quarter. Supply appeared to be adequate even with good demand and the anticipated loss of domestic bismuth output due to the closing in 1998 of the Omaha, NE, plant of ASARCO Incorporated, the only primary producer in the United States.

The Defense Logistics Agency (DLA) sold no bismuth from the Defense National Stockpile during the first quarter of 1997.

Bismuth continues to be the main candidate for replacing lead in plumbing alloys. There is also a drive to replace lead additions generally, such as the lead that is added to steel alloys to obtain better machinability. One major domestic steel company began to offer a bismuth-containing substitute for the leaded alloy nearly 20 years ago. Others have yet to move away from the much cheaper lead additions (Ozols, 1997).

Update

The New York dealer price for bismuth began increasing in April and started a sharp rise in May, reaching \$3.90 per pound by mid-June, as supplies tightened. Mexico, Peru, and South Korea all stopped supplying the bismuth market just when trader activity had begun to pick up (Mining Journal, 1997a).

The DLA sold 106 metric tons of bismuth for \$795,000 in early May, using the negotiated bid system. This completed sales for fiscal year 1997. Therefore no more bismuth will be available from the stockpile until October 1997 (Mining Journal, 1997b). Furthermore, the amount available for sale in fiscal year 1998 will be limited to 85 metric tons because that is the total inventory of bismuth remaining in the Defense National Stockpile.

References Cited

- Mining Journal, 1997a, Minor metals in April: Mining Journal, v. 388, no. 8429, May 16, p. 399.
———1997b, Minor metals in May: Mining Journal, v. 388, no. 8432, June 6, p. 453.
Ozols, Victor, 1997, Cold-finished bar—some customers say get the lead out: American Metal Market, v. 105, no. 34, February 19, p. 9A.

TABLE 1
SALIENT BISMUTH STATISTICS 1/

(Kilograms, unless otherwise specified)

	1996 p/	1997 First quarter
Consumption	1,520,000	387,000
Exports 2/	151,000	NA
Imports for consumption	1,490,000	NA
Price per pound, dealer, end of period	\$3.30	\$3.20
Stocks, end of period, consumer	122,000	108,000

p/ Preliminary. NA Not available.

1/ Data are rounded to three significant digits.

2/ Comprises bismuth metal and the bismuth content of alloys and waste and scrap.

TABLE 2
BISMUTH METAL CONSUMED IN THE UNITED STATES, BY USE 1/

(Kilograms)

Use	1996 p/	1997 First quarter
Chemicals 2/	855,000	211,000
Bismuth alloys	401,000	108,000
Metallurgical additives	231,000	62,300
Other	35,000	6,000
Total	1,520,000	387,000

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes industrial and laboratory chemicals, cosmetics, and pharmaceuticals.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF BISMUTH METAL , BY COUNTRY 1/

(Kilograms)

Country	1996			1997	
	Year total	December	Fourth quarter	January	February
Belgium	584,000	35,300	122,000	87,400	53,100
Canada	80,800	2,430	12,500	5,830	6,240
China	151,000	--	34,400	17,100	--
Germany	498	90	90	--	13
Hong Kong	15,800	--	--	--	--
Japan	1,680	--	640	--	--
Macao	--	--	--	20,000	--
Mexico	453,000	18,900	103,000	20,000	97,800
Peru	19,500	--	--	--	--
Spain	--	--	--	100	--
Switzerland	--	--	--	19	--
United Kingdom	189,000	23,500	54,000	18,100	59,900
Total	1,490,000	80,200	326,000	169,000	217,000

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 4
U.S. EXPORTS OF BISMUTH METAL, ALLOYS, AND WASTE AND SCRAP, BY COUNTRY 1/

(Kilograms, metal content)

Country	1996			1997	
	Year total	December	Fourth quarter	January	February
Argentina	137	--	--	--	--
Australia	197	--	--	--	--
Belgium	65,500	--	38,300	--	--
Brazil	50	--	--	--	--
Canada	59,500	5,700	12,900	16,200	12,700
Dominican Republic	1,150	--	504	120	--
Finland	472	--	--	--	--
France	5,380	--	--	--	--
Germany	497	--	476	--	--
Guatemala	14,200	--	14,200	--	--
Ireland	227	--	227	--	699
Korea, Republic of	63	--	--	--	--
Mexico	51	--	51	--	102
Netherlands	209	--	--	--	4,980
Singapore	144	--	44	--	100
Switzerland	2,220	--	--	--	--
Thailand	45	--	--	--	--
United Kingdom	596	--	--	--	--
Total	151,000	5,700	66,700	16,300	18,600

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.